

# TIMEUP: DIAGNOSTIC DEVICE FOR THE DETECTION OF UROPATHOGENS IN URINARY CATHETERS

**KEYWORDS:** DIAGNOSTIC DEVICE, UROPATHOGENS, BACTERIA DETECTION, URINARY TRACT INFECTIONS, URINARY CATHETERS, EARLY STAGE DETECTION, CONTINUOUS MONITORING, POLYMERIC MATRIX, BIOMATERIALS.

## STATE OF THE ART

At TIMEUP, Lda, we are developing the first real-time urine monitoring device, designed to be connected to the urinary catheter for preventive catheter-associated urinary tract infections (CAUTIs) control. Our device, TimeUp®, is an on-site in vitro diagnostic technology that utilizes a matrix that signals the presence of pathogenic bacteria, allowing healthcare personnel or even the patient to easily interpret the results.

TimeUp® will continuously and autonomously monitor the patient's urine, fundamentally transforming the current standard of care from a reactive approach reliant on symptomatic patients, direct involvement by medical doctors for urine sampling, urine analysis, and often the prescription of broad-spectrum antibiotics, to a proactive/preventative strategy where pathogens are detected before infection occurs, enabling the adoption of preventive measures to halt the potential progression of an infection. This shift in approach will be crucial for preventing CAUTIs while significantly reducing healthcare costs, curbing unnecessary antibiotic prescriptions, and enhancing patient well-being.

## VALUE PROPOSITION

Diagnostic device for detecting pathogenic bacteria in urinary catheters, preventing the development of a Urinary Tract Infection.



### STAGE OF DEVELOPMENT

TRL 3



### IPR LEGAL STATUS

Patent Pending nº 119254  
filed on 14/02/2024.



### OWNERSHIP

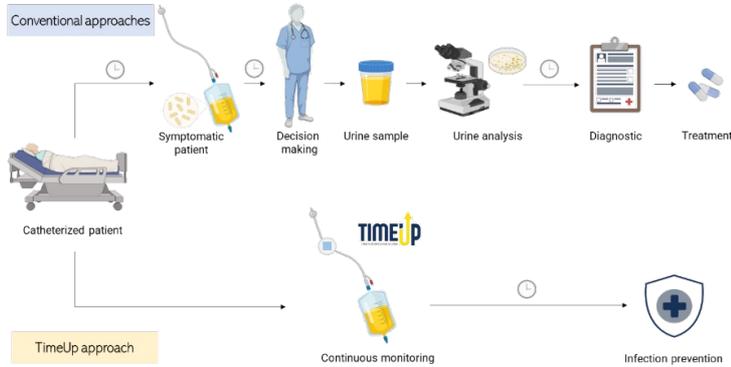
The rights are held by the University of Coimbra (92%), the Polytechnic Institute of Coimbra (4%) and by two of the Founders of the Spin-off, Igor Tiago (2%) and Marcos Mariz (2%)



### COLLABORATION SOUGHT

Licensing for further developments with medical devices companies or R&D partnership with academic institutions and research centers.

## ADVANTAGES



- Anticipates the patients' physical symptoms;
- Allows action in an early stage;
- Will be able to detect and identify different bacteria;
- Decreases hospital stay length, additional effort for health professionals and associated costs;
- Improves patients' quality of life;
- Decreases administration of antibiotics;
- Sampling-free, reducing the use of test kits and consumables;
- Increases resources efficiency.

## APPLICATION

- Prevention/detection of catheter-associated urinary tract infections;
- Potential to be developed as in-house monitoring system for non-catheterized patients.
- Potential to be applied in other areas such as water quality control.

## AWARDS:

- Prototransfer INESPO III, 4 000 € (2018)
- EIT Health Innostars, 25 000 € (2019)
- Caixa Impulse, La Caixa Foundation, 77 000 € (2019)
- Call INNOV-ID, Portugal Ventures, 100 000 € (2023).